

## **WATERSHED LESSON #8:**

### ***Measure, Communicate, and Account for Progress***

Having systems in place to measure and communicate progress is a critical part of watershed work. Appropriate measures not only keep watershed issues on people's radar screens, but, as they are met, allow stakeholders to share successes and to highlight new challenges to the watershed.

Progress can be measured in many ways and communicated through meetings, brochures, internet sites, annual reports, news releases, and other ways. The important thing is to make sure that the appropriate measures of progress (often referred to as indicators) are selected and that information on these indicators is shared with relevant stakeholders. Measurements of progress should be associated with achieving goals set for the watershed effort (see Watershed Lesson #1). Depending on the goal, groups may choose water quality measurements (e.g., dissolved oxygen, bacteria levels, fecal coliform) or less directly water-quality based results (e.g., number of trees planted, number of watershed groups in a state, pounds of trash collected, number of canoe rentals, number of miles protected from erosion). To make sure that progress does indeed occur, most watershed groups spell out who is responsible for what in their watershed plans. Some go so far as to establish agreements that commit groups to certain actions within certain time frames. Spelling this out can help with accountability.

In terms of groups to whom progress should be communicated, county commissioners, elected local and state officials, watershed residents, and major companies in the watershed are at the top of the list for most watershed practitioners. Over time, as updates on progress are made, practitioners have found that some constituencies will begin to ask for them - a sign that awareness has been raised.

### ***Tennessee Valley Authority Data Collection is Not Enough***

*"The Tennessee River is Tennessee Valley Authority's (TVA) special responsibility and reason for being. The people of our region expect us to serve as the river's manager and caretaker."* According to Wayne Poppe of the Tennessee Valley Authority's Clean Water Initiative, that acknowledgment of stewardship drives the organization's commitment to accountability through good stakeholder communication.

***The objective is to make sure water resources are in good enough condition to provide the benefits important to local citizens***

The "front lines" of interaction with the public are TVA's River Action Teams -- water resource professionals and education specialists assigned to work in specific watersheds

across the Tennessee Valley. Their mission is to build partnerships with local residents, business and industry, and government agencies and to foster public responsibility for watershed protection and improvement. TVA's watershed management strategies for individual hydrologic units all across the Tennessee Valley are based on both a scientific assessment of resource needs and an assessment of local community needs. The objective is to make sure water resources are in good enough condition to provide the benefits important to local citizens. Team members work side-by-side with watershed residents to accomplish these objectives, and Poppe feels this partnership approach is critical: "Our on-going presence in the field is a key component of our efforts to establish the dialogue that will help to improve and protect the river. No matter how good we are at data collection and reporting, we ultimately miss the mark if we fail to provide this interaction with the river's users."

Telling the story is important too. Communication products that illustrate progress achieved should be tailored to fit the audiences they're trying to reach. As an example, a new series of attractive and user-friendly watershed brochures profile the ecological health of TVA's lakes by reporting on the condition of five indicators or "vital signs" -- chlorophyll, oxygen, fish, bottom life, and sediment. The brochures can be used by watershed residents to track changing conditions, as well as to identify areas where further cleanup and protection must occur. Ratings for ecological health indicators are color-coded onto an easy-to-read map of the watershed, allowing residents to see at a glance what conditions are like in the lakes that matter most to them. The information in the brochures is presented with a river user's perspective in mind, taking into account the varied interests of local residents -- everything from whether it's safe to eat the river's fish or swim in the lake. Far more than just a "report card" on ecological health, the brochures serve to raise awareness among watershed residents about local water quality issues and to channel that new understanding into support and involvement in improvement and protection efforts.

Poppe believes there are some fundamental aspects of measuring progress: "Accurately monitoring conditions in the watersheds. Reporting on the types of things that are meaningful to the public. Effectively communicating both progress and the need for improvement. Helping watershed residents use this information to make changes that will ultimately lead to the fulfillment of their goals for the river's use. *That's* the kind of accountability that can serve as a benchmark for substantive, long-term improvements in water quality."

*For more information:* contact Wayne Poppe, 423-451-7333, 423-751-7648 (fax)

***Brazos River Authority, Texas***  
***Progress Doesn't Happen Overnight***

Tom Conry, from the Brazos River Authority in Texas, stresses that the results of watershed work do not come about over night. It may take 5 to 10 years of sharing information to achieve substantial progress. For example, in the Oyster Creek watershed, data collected by volunteer monitors was shared with industry and others in the community. The data suggested an impact on the system by the industry's discharge. After working together for two years, industry came to understand that they were impacting the stream. Similarly, the monitors realized that industry was only responsible for part of the problem: non point source pollution was responsible for up to 50 percent.

Industry decided to re-engineer their discharge system to remedy the situation when they realized that (1) the data was good and (2) the monitors were not pointing fingers exclusively at them. As a result, the partnership has continued to grow. In fact, the industry has supported the volunteer monitors with chemical supplies and monitoring kits. In addition, they are funding a constructed wetlands pilot project. The key, Conry believes, is to keep key constituencies aware of progress as its made in the watershed and to say thank you as little successes occur.

**For more information:** contact Tom Conry, Brazos River Authority, 817-772-6010, 7935 (fax), tomco@brazos.org

## ***Key Contacts and Resources***

### PAPERS THAT ADDRESS ACCOUNTABILITY IN WATERSHEDS

- ***Addressing Barriers to Watershed Management***, Robert W. Adler, Associate Professor University of Utah College of Law, Salt Lake City, UT, paper delivered at Watershed '96, <http://www.epa.gov/owow/watershed/Proceed/adler.html>. See ***Journal of Environmental Law*** for complete article, 25 Environmental Law 973-1106 (1995).
- ***Clean Water Act Problems and Watershed Solutions***, Katherine A. O'Connor, A.I.C.P., Health and Regulatory Specialist, Orange County Water District, Fountain Valley, CA paper delivered at W'96, <http://www.epa.gov/owow/watershed/Proceed/oconnor1.html>
- ***Watershed Education and Restoration***, Dean Grover, Forest Fisheries Biologist, Ochoco National Forest, Prineville, OR, David A. Nolte, Bring Back the Natives Project Coordinator, Trout Unlimited, Redmond, OR paper delivered at Watershed '96, <http://www.epa.gov/owow/watershed/Proceed/grover.html>
- ***Indicators of International Progress***, Ethan T. Smith, Supervisory Hydrologist, U.S. Geological Survey, Reston, VA, Martin P. Bratzel, International Joint Commission, Windsor, Ontario, Canada paper delivered at Watershed '96, [http://www.epa.gov/OWOW/watershed/Proceed/smith\\_et.html](http://www.epa.gov/OWOW/watershed/Proceed/smith_et.html)
- ***Maryland's Tributary Strategies: Statewide Nutrient Reduction Through a Watershed Approach***, Lauren Wenzel, Roger Banting, and Danielle Lucid, Maryland Department of Natural Resources, Annapolis, MD paper delivered at Watershed '96, <http://www.epa.gov/OWOW/watershed/Proceed/wenzel.html>

### WATERSHED GOALS AND INDICATORS

- ***Developing an Applied System of Ecological Indicators for Measuring Restoration***

- Progress in an Urban Watershed***, Andrew Warner, Hydrologist, Metropolitan Washington Council of Governments paper delivered at Watershed '96, <http://www.epa.gov/OWOW/watershed/Proceed/warner.html>
- ***Water Works: Your Neighbors Share Ideas on Working in Partnership for Clean Water***, Tennessee Valley Authority, March 1997. Useful guide. Kathleen O'Brien, editor, 423-632-8502, 423-632-3188 (fax). See story of Linda Hixon. ***Tennessee Valley Authority, Lake and Stream Condition Watershed Brochures***, Wayne Poppe, 423-451-7333, 423-751-7648 (fax)
  - ***Index of Watershed Indicators Project***, Chuck Spooner, 202-260-1314, EPA's effort, in partnership with many, to describe the condition of watersheds nationally. Available at <http://www.epa.gov/surf/iwiprev.html>
  - ***Water Quality Indicator's Guide: Surface Waters***, Second Edition, Soil and Water Conservation Society, 7515 Northeast Ankeny Road, Ankeny, IA 50021-9764, 515-289-2331, <http://www.swcs.org/books.htm>, easy-to-follow process to check local lakes and streams
  - ***Environmental Indicators of Water Quality in the United States***, EPA841-R-96-002 and ***Environmental Indicators of Water Quality in the United States Fact Sheets*** EPA841-F-96-001, June 1996, <http://www.epa.gov/OW/indic/>, available for free by calling 1-800-490-9198. Short reports describing the water quality in the United States using a set of 18 environmental indicators that measure progress toward national water goals and objectives. Contact: Sarah Lehmann, 202-260-7021.